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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/919,916	08/02/2001	Atsushi Hasegawa	HITA-0081	3985

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EXAMINER

NGUYEN, HA T

ART UNIT

PAPER NUMBER

2812

DATE MAILED: 03/11/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/919,916

Applicant(s)

HASEGAWA, ATSUSHI

Examiner

Ha T. Nguyen

Art Unit

2812

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8, 10-19 and 23-26 is/are rejected.
- 7) ☒ Claim(s) 9 and 20-22 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Objections

1. Claims 1, 2, 6-10, 11, 14, 17, 20, and 23 are objected to because of the following informalities: in claims 1 and 2, lines 7, deletion of "is" is suggested for correctness.

Appropriate correction is required.

Claims 6-10, 11, 14, 17, 20, and 23 variously depend from claim 1 or 2, they are objected to for the same reason.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-4, 6, 10, 11-13, and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al. (U.S. Patent 5585290, hereinafter "Yamamoto").

[Claims 1-4] Referring to Figs. 1(a), 1(b), 25, 32(a), 32(b), related text and example 10, Yamamoto discloses an active matrix display device comprising a substrate having a gate signal line and a drain signal line; a thin-film transistor that is driven being supplied with a scanning signal from the gate signal line, the thin-film transistor having a gate electrode that is made of a material different than the gate signal line and has a part of which directly laid on or under the gate signal line to establish electrical connection (or electrically connected to the gate signal line or overlaps with the gate signal line, that is made of a layer different than the gate signal line and that is electrically connected to the gate signal line) (see Fig. 32(b)); a pixel electrode that is supplied with a video signal from the drain signal line via the thin-film transistor (See col. 1, lines 17-col. 3, line 4 and col. 24, lines 18-30). But it does not disclose all the features in a same device. However, it would have been obvious for a person of ordinary skill in the art to use conventional features in similar device to obtain similar results.

[Claims 6 and 11-13] Yamamoto also discloses wherein the gate signal line is made of aluminum (see col. 1, lines 49-54);

[Claims 10 and 23-25] wherein the active matrix device is a liquid crystal device (see example 10).

Therefore, it would have been obvious to use Yamamoto's conventional features to obtain the invention as specified in claims 1-4, 6, 10, 11-13, and 23-25.

4. Claims 5, 7, 14-16, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto in view of Yudasaka et al. (U.S. Patent 5563427, hereinafter "Yudasaka").

Yamamoto discloses substantially the limitations of claims 5, 7, 14-16, and 26, as shown above. It also discloses a display area including a set of pixel regions each having a first thin-film transistor; and a driving circuit forming area located outside the display area wherein a gate electrode of the first thin-film transistor is made of a material different than a gate signal line and is electrically connected to the gate signal line (see Figs. 25, 33 and col. 6, lines 29-58).

But it does not disclose expressly a driving circuit having second thin-film transistors and gate electrode of each of the second thin-film transistors is made of a material different than a wiring layer or electrode and electrically connected to the wiring layer or electrode; the gate electrode of the first thin-film transistor is made of the same material as that of each of the second thin-film transistors; and the gate signal line is made of the same material as the wiring layer or electrode; wherein a semiconductor layer of the first thin-film transistor and/or each of the second thin-film transistors is made of polysilicon. However, the missing limitations are well known in the art because Yudasaka discloses the use of thin-film transistors in driving area and display area with gates of first and second transistors made of a same material (See Fig. 4), and polysilicon is used as semiconductor material (see col. 9, lines 20-41). It would have been obvious for a person of ordinary skill in the art to use the same low resistivity material for wiring layer conducting signals to gates or drain /source regions in the first and second transistors, this material could be different from the gate electrodes material, as taught by Yamamoto .

A person of ordinary skill is motivated to modify Yamamoto with Yudasaka to use a conventional features in the display device.

Art Unit: 2812

Therefore, it would have been obvious to combine Yamamoto with Yudasaka to obtain the invention as specified in claims 5, 7, 14-16, and 26 .

5. Claims 8 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto in view of Yamagata et al. (U.S. Patent 6528824, hereinafter "Yamagata").

Yamamoto discloses substantially the limitations of claims 8 and 17-19, as shown above.

But it does not disclose expressly wherein metal layers are formed on a drain region and a source region, respectively, of the first thin-film transistor and/or each of the second thin-film transistors, and portions of the respective metal layers are exposed through respective contact holes that are formed through a passivation film that covers the thin film transistor .

However, it is well known in the art because Yamagata discloses these features (See fig. 9A).

A person of ordinary skill is motivated to modify Yamamoto with Yamagata to obtain connections to the drain and source regions .

Therefore, it would have been obvious to combine Yamamoto with Yamagata to obtain the invention as specified in claims 8 and 17-19.

Allowable Subject Matter

6. Claims 9 are 20-22 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 9 are 20-22 recite "wherein the metal layers are formed at the same time as a gate electrode of the thin-film transistor is formed".

These features in combination with the other elements of the claims are neither disclosed nor suggested by the prior art of record.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ha Nguyen whose telephone number is (703)308-2706 . The

Art Unit: 2812

examiner can normally be reached on Monday-Friday from 8:30AM to 6:00PM, except the first Friday of each bi-week.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Niebling, can be reached on (703) 308-3325. The fax phone number for this Group is (703) 308-7722.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0956.



Ha Nguyen
Primary Examiner
03- 07- 03